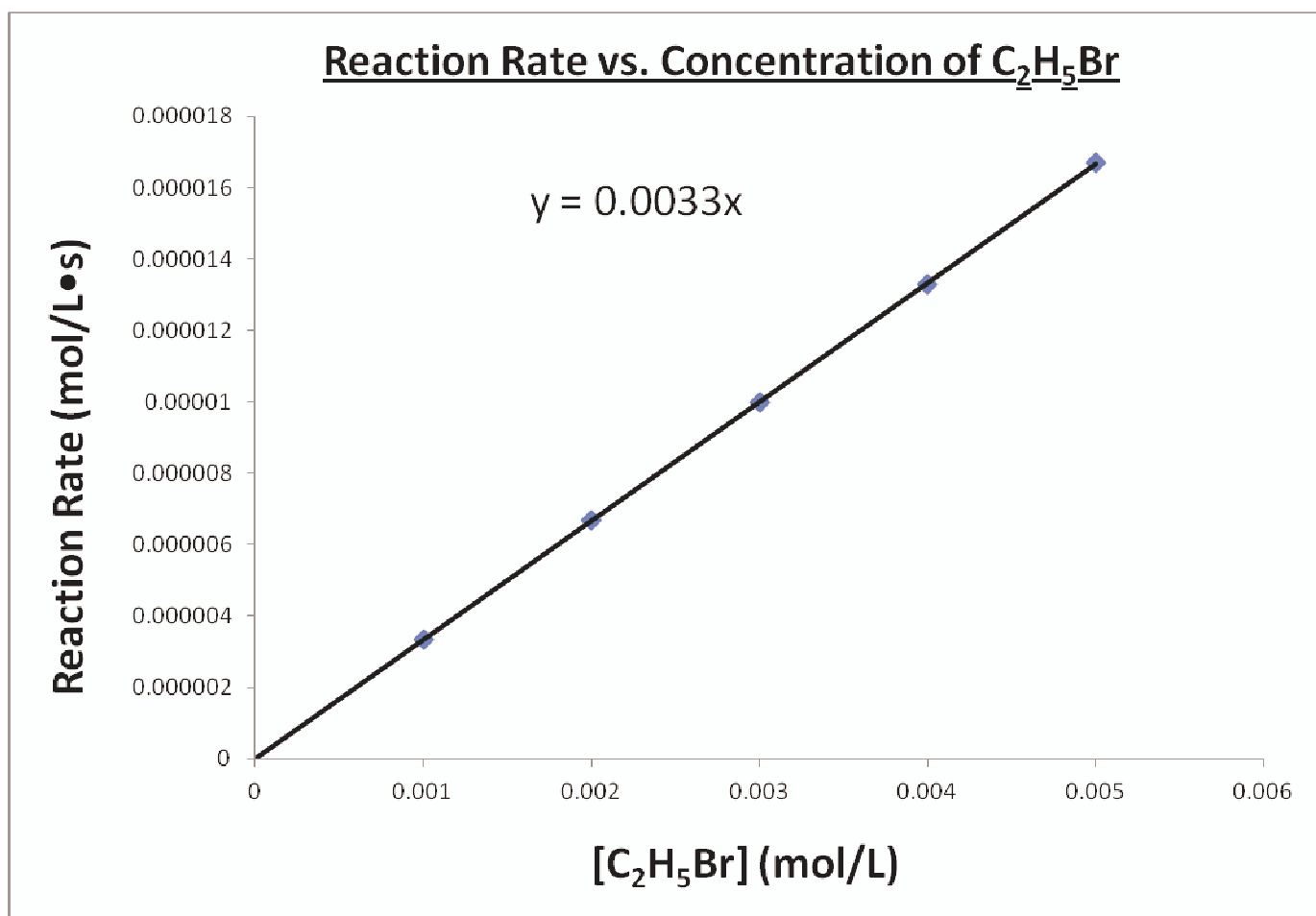


Activity 6.3: Graphical Analysis of Reaction Rates vs. Concentration

Table 1 Data Obtained from Experiment 1

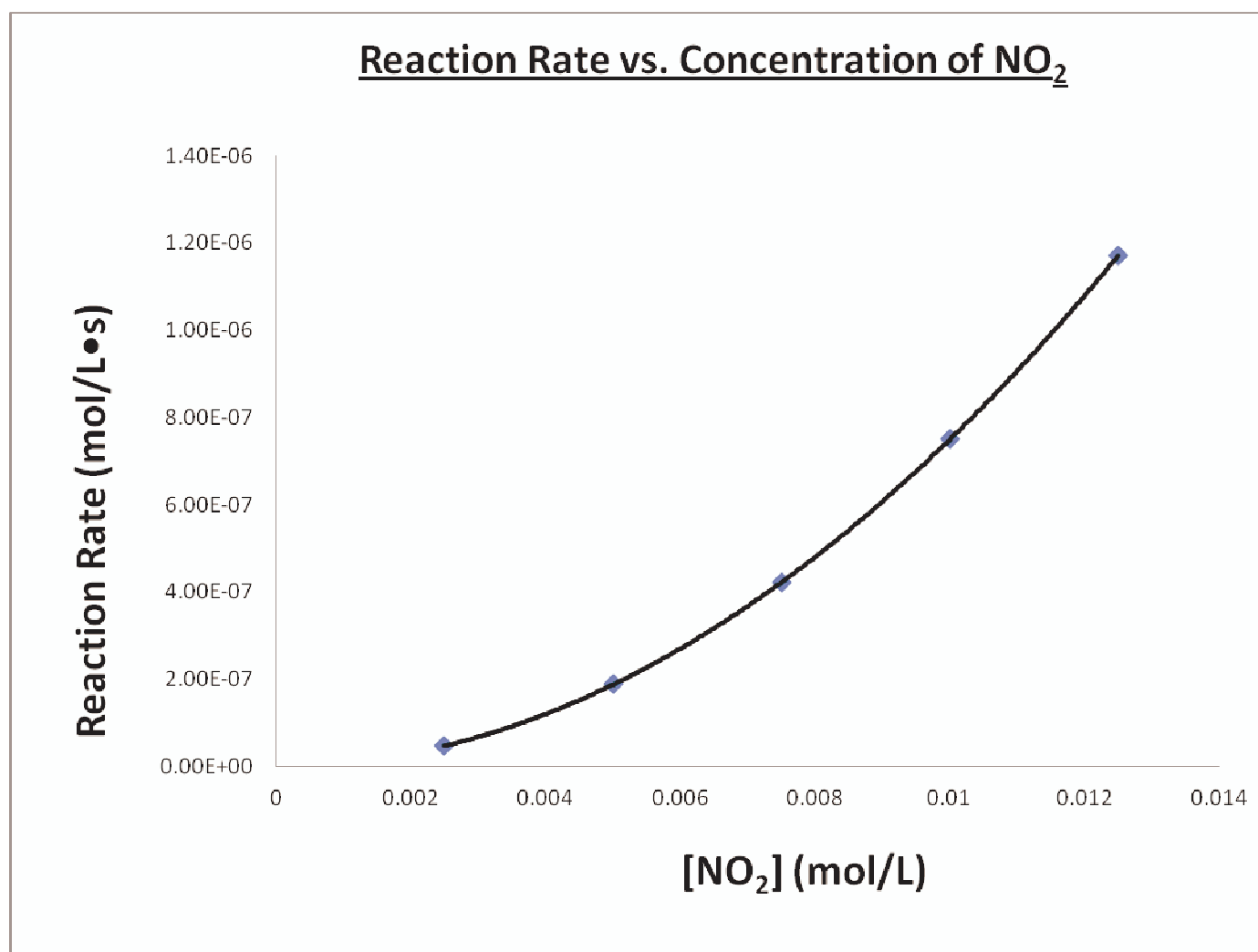
[C₂H₅Br] (mol/L)	Reaction Rate (mol/L•s)
1.00×10^{-3}	3.33×10^{-6}
2.00×10^{-3}	6.67×10^{-6}
3.00×10^{-3}	1.00×10^{-5}
4.00×10^{-3}	1.33×10^{-5}
5.00×10^{-3}	1.67×10^{-5}



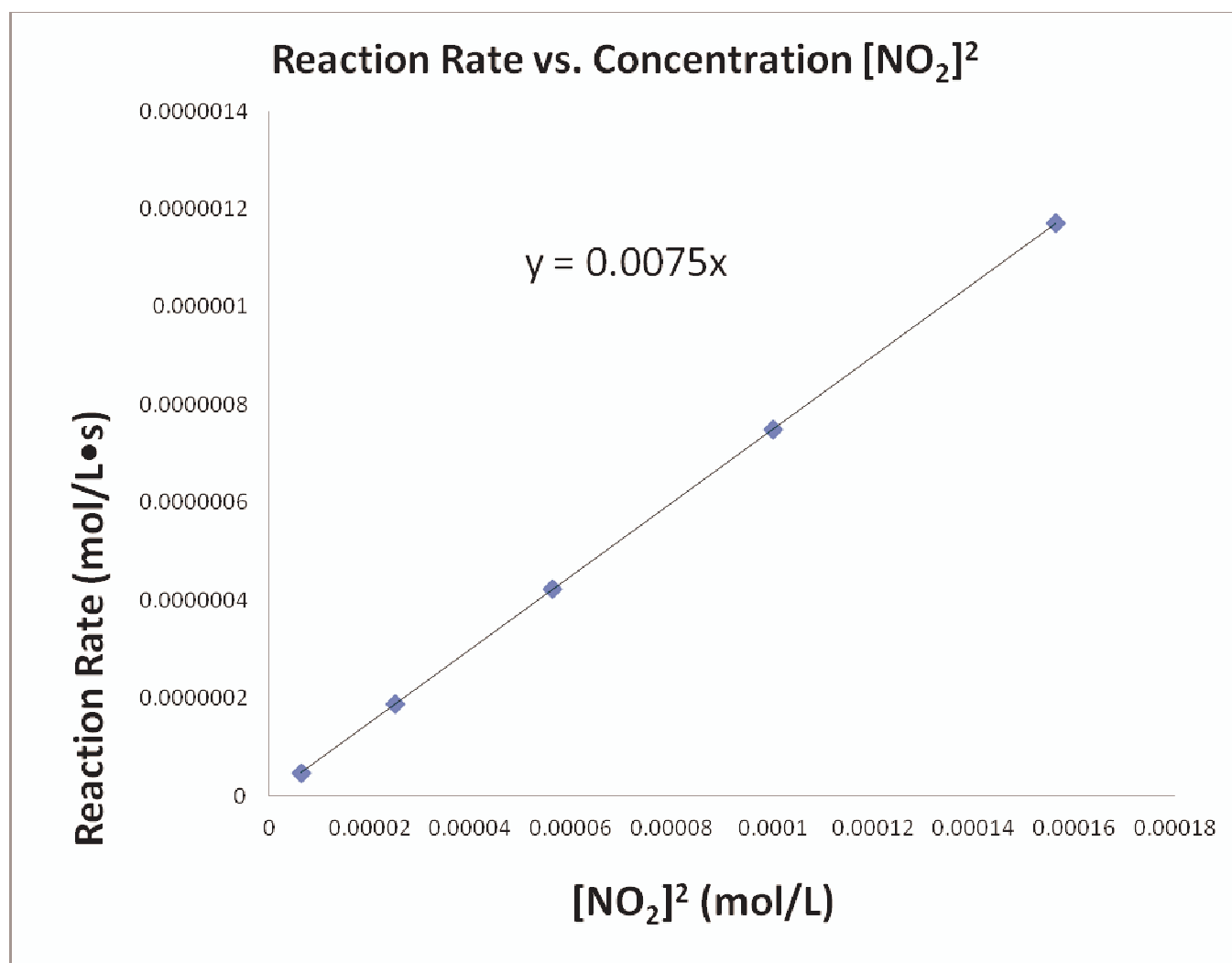
Rate Law Rate = $k [\text{C}_2\text{H}_5\text{Br}]^1$

Table 1 Data Obtained from Experiment 2

[NO₂] (mol/L)	Reaction Rate (mol/L•s)
2.50×10^{-3}	4.69×10^{-8}
5.00×10^{-3}	1.88×10^{-7}
7.50×10^{-3}	4.22×10^{-7}
10.0×10^{-3}	7.50×10^{-7}
12.5×10^{-3}	1.17×10^{-6}



$[\text{NO}_2]^2$ (mol/L)	Reaction Rate (mol/L•s)
6.25×10^{-6}	4.69×10^{-8}
2.50×10^{-5}	1.88×10^{-7}
5.63×10^{-5}	4.22×10^{-7}
1.00×10^{-4}	7.50×10^{-7}
1.56×10^{-4}	1.17×10^{-6}



Rate Law Rate = $k [\text{NO}_2]^2$